REMARKS

In the Office Action claims 1, 2, and 14-22 have been rejected and it is noted with appreciation that claims 3-10 and 13 contain allowable subject matter. Claims 1, 21 and 22 have been amended to add structure to clarify the positioning of the acceleration modules to be between the modules that contain the cathode and anode. Claim 3 has been amended to change its dependency to claim 2 and to alleviate the duplication with claim 13.

The objection regarding the absence of drawings is puzzling in that under 35 U.S.C. §371(c) for nationalization of a PCT application, all requirements were met by the submission of the all the parts listed in 371(c)(1-5). No specific requirement for a separate set of drawings is required since the copy of the international PCT application already has the drawings. As such, withdrawal of this objection is hereby requested. Also, as a courtesy, copies of the international drawings prepared and amended for U.S. requirements are hereby enclosed. Please note the addition of the "Prior Art" notation to figures 1, 2 and 3 and the correction of lead lines and numerals in figures 6 and 9.

In the Office Action, claims, 1, 2 14-20 and 21 have been rejected under 35 U.S.C. §103(a) as being obvious over the combination of the Mihara et al. reference in view of the Rose reference. This rejection is respectfully traversed. The combination of the two references is also traversed.

The Rose reference is a linear accelerator for accelerating ions into wafers and other material. The tubular shielding is used to shield workers from any incidental emissions of unwanted x-rays through the accelerator in a direction away from the ion beam. The ion beam does not hit a anode to produce any X-rays. This device has nothing to do with X-ray tubes and

is directed to a completely different technology and apparatus for different purposes.

Secondly, the X-ray device 8 disclosed in the Mihara reference has an accelerator 11 that uses microwaves from the microwave waveguide to accelerate the particles. No use of E-fields or voltage differentials is disclosed in Mihara's acceleration component 11. Contrary to the statement made in the first Office Action, the device 11 is not a module nor is modular with respect to its cathode 9 or anode 10.

It is believed that the examiner has not provided sufficient reasons for the combination of the two references apart from using hindsight to render applicant invention obvious. As stated in the recent Supreme Court decision of KSR International Co. v. Teleflex, Inc. 127 S. Ct. 1727, 1741; 82 USPQ 2nd, 1385, 1396 (2007),

> ...it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.

No such reason is given in the rejection. There is no reason given to replace a microwave waveguide that obtains microwaves from a separate section 4 that is not in the head 6 and replace it with a linear accelerator with E-field of high voltage to accelerate the beam. Furthermore, no support, hint or suggestion is given to further modify the microwave driven linear accelerator 11 with a high voltage system. It is not seen how an X-ray tube may be modified by the elimination of the microwave driven accelerator 11 that obtains its microwave from the separate base with a component from a device that is from a separate technology for producing ions in a non-X-ray device is considered obvious apart from the use

of hindsight. Any such stated reason given appears to use hindsight without specifying what the relevant field of technology is.

In addition, the claims as amended particularly show the further modular acceleration units between the first and second acceleration unit i.e. between the cathode and anode. In the Rose reference, the further modular acceleration units are placed downstream from the cathode and anode electrodes 4. The combination of the Mihara and Rose reference at best show the use of the Rose modular shields downstream of the anode 10 shown in the Mihara reference. However, such a device is not functional since the anode produces X-rays upstream thereof. As such, the claims 1 and 21 as amended are believed to be patentable over the combination of the Mihara and Rose references.

Claim 2, being dependent on claim 1 is believed allowable for the same reasons as set forth in claim 1. In addition, contrary to what the Office Action states, there is no disclosure of the limitation of claim 2. Rose clearly says only that "The voltage gradient is generated by a set of metal electrodes, with successively increasing or decreasing voltages imposed on them. . ." Applicant's invention as defined in claim 2 provides the differential (e.g. increase) is constant for all acceleration modules. Rose does not disclose this constant differential. As such, claim 2 for this additional reason is believed allowable over the prior art.

Claim 14 being dependent on claim 1 is believed allowable for the same reasons as set forth above.

Claim 15 being dependent on claim 14 is believed allowable for the same reasons as set for the above. In addition, Rose shows no high-ohmic interior coating. At best

Rose shows lead panels embedded in the ceramic. See Col. 2, lines 35-44. It merely states that the inner surface 32 is exposed to vacuum. It is not clear where the high-ohmic coating is stated in this section. After a careful reading, applicant finds no coating is disclosed on the interior surface of the insulating ceramic in the Rose reference.

Claims 16-20 are dependant on claim 1 and are believed allowable for the same reasons set forth above.

Independent claim 22 has been rejected as being obvious over the combination of the Mihara, Rose and Rother references. Claim 22 is believed allowable for the same reasons set forth for claims 1 and 21. The addition of the Rother reference does not alleviate the deficiencies of the above combination nor alleviate the improper combination of the Rose and Mihara references. Again the Office Action mischaracterizes Mihara to use high voltage E-filed to accelerate the particles. However, as it clearly states, Mihara uses microwaves from a wave guide and not a high voltage E-filed to accelerate the particles. Furthermore, there is no explicit disclosure in Ross as to how the electrodes and ceramics or epoxy is held together as a single unit. The Rother reference only discloses a transparent window unit being secured to the x-ray tube. It does not disclose modules secured together. As such the entire combination of references is incorrect and claim 22 is believed to be allowable.

As such, it is now believed that the case is in condition for allowance and early notification of such allowance is earnestly solicited.

It is believed that no fee is due with the submission at this time; however, if the Patent Office determines otherwise, it is hereby authorized and respectfully requested that it be charged to our Account No. 50-0852.

Respectfully submitted,

REISING, ETHINGTON,
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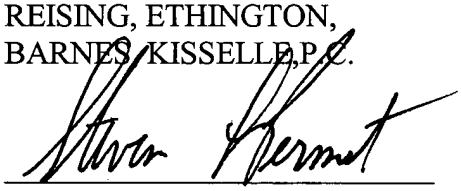

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